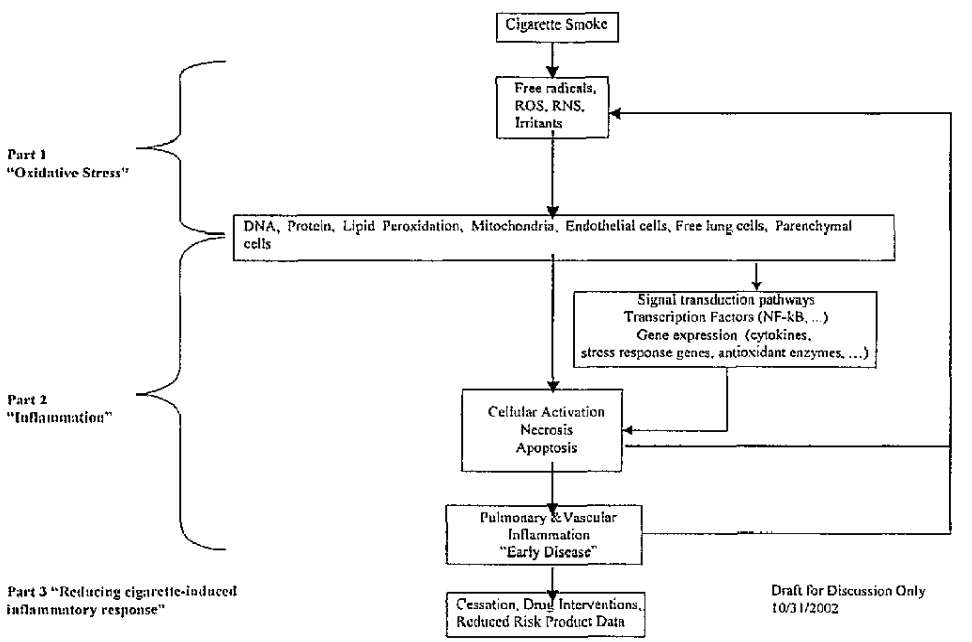
Workshop on Cigarette Smoke-induced Oxidative Stress and Inflammation

Agenda

The objectives of the workshop on cigarette smoke-induced oxidative stress and inflammation are as follows:

1. To review the science of cigarette smoke-induced oxidative stress and the resulting inflammatory response.
2. To discuss the potential link of oxidative stress and the resulting inflammatory responses with disease.
3. To evaluate our current efforts to investigate oxidative stress and inflammation and to identify gaps.
4. To identify new assays that can be used for guidance and to evaluate potentially reduced risk products.

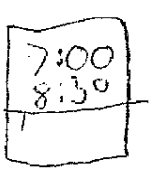
The schematic below explains the concept of the symposium:



Tuesday, December 17th

Part 1. Cigarette smoke-induced oxidative stress

8:30	Introduction and chair – M. Schorp
8:40	Oxidative stress – inflammation – disease. An overview - R. Carchman
9:20	Chemical reactions of radicals/oxidants with biomolecules – J. Seeman
10:00	Questions for clarification
10:30	Coffee Break
10:45	Cellular targets 1: Lipid peroxidation – P. Kuhl
11:15	Cellular targets 2: Protein damage - T. Meisgen
11:45	Cellular targets 3: DNA damage – D. Weisensee
12:15	Questions for clarification
12:30	Lunch
13:30	Assays/models for cigarette-smoke induced oxidative stress: historical work at PM – E. Sanders
13:45	Assays/models for cigarette-smoke induced oxidative stress: In vitro assays – O. Moennikes,
14:05	Assays/models for cigarette-smoke induced oxidative stress: In vivo assays - C. Euchenhofer
14:25	Assays/models for cigarette-smoke induced oxidative stress: Biomarker in clinical studies - S. Feng
14:50	Questions for Clarification
15:10	Coffee Break
15:30	Assays/models for cigarette-smoke induced oxidative stress: ESR techniques - J. Wooten
15:50	Assays/models for cigarette-smoke induced oxidative stress: Ex-vivo ESR – J. Müller (Magnettech)
16:10	Questions for clarification
16:20	From oxidative stress to inflammation - W. Reininghaus
16:50	Discussion
18:00	Day end



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Wednesday, December 18th

Part 2. Cigarette smoke-induced inflammatory responses (mechanisms and mode of action)

8:30	Introduction and chair – W. McKinney
8:40	Possible ways to inflammation – Intracellular signaling - S. Gebel
9:10	Possible ways to inflammation – Intercellular signaling - W. McKinney
9:40	Possible ways to inflammation – cell death – B. Friedrichs
10:10	Questions for clarification
10:30	Coffee Break
10:45	Possible ways to inflammation - cell activation via cell-derived ROS and RNS – R. Schleef
11:15	Cigarette smoke-induced HO-1 expression: Impact on apoptosis, cell survival, and inflammation - T. Müller
11:45	Sensory irritation and inflammatory responses – G. Kobal
12:00	Questions for clarification
12:15	Lunch
13:30	Irritation of the respiratory tract: pathomorphological effects – H.Weiler
13:50	Cigarette smoke-induced pulmonary inflammation – animal models- P. Vanscheeuwijk
14:20	Cigarette smoke-induced pulmonary inflammation – observations in humans – T. Major
14:50	Questions for clarification
15:15	Coffee Break
15:30	Cigarette smoke-induced vascular inflammation – animal models – R. Schleef
16:00	Cigarette smoke-induced vascular inflammation – observations in humans – K. von Holt
16:30	Questions for clarification
17:00	Discussion
18:00	Day end

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Thursday, December 19th

Part 3. Reducing cigarette smoke-induced inflammatory response (lessons from interventions for risk reduction guidance)

8:30	Introduction and chair – T. Tricker
8:40	Effect of smoking cessation – E. Sanders
9:10	Efficacy of antioxidant interventions and observations from drug developments and interventions – M. Schorp
9:30	Individual variation of antioxidant defenses – possible study confounders? – R. Rylander
9:45	Questions for clarification
10:00	Coffee Break
10:15	Measurement of cigarette smoke radicals from some commercial and prototype cigarette products – G. Chan
10:30	Data from evaluations of potentially reduced risk products - R. Elves
10:50	Questions for clarification
11:00	**Part 4. Round table discussion**

Four tables will be chaired by a non-speaker (tbd):

- Is cigarette smoke-induced oxidative stress and inflammation on the pathway of disease (e.g., CVD, COPD, cancer)?
- How do we interpret changes in both oxidative stress and inflammation?
- What non-clinical and clinical assays should we use to assess both oxidative stress and inflammation?
- What guidance should we give to product development and product assessment?

All participants will circulate around the tables spending 20 min at each of the four tables discussing the outlined questions. A summary of the discussions at each table will be presented after the lunch break

12:30	Lunch
13:30	Report form the tables
15:00	Coffee break
15:15	General discussion
16:00	End of session

Oxidative Stress and Inflammation Symposium
Presentation Guidance

Part 1. Cigarette smoke-induced oxidative stress.

Section 1

- Presentations for this section of the symposium should focus on objectives # 1 and 2, with emphasis on oxidative stress.
- The following questions may provide guidance with objective # 2. Does the scientific literature suggest that lipid peroxidation, protein and DNA damage play a role in the development of disease? Are these predictive of disease?

Section 2 (after Lunch)

- Presentation for this section should focus on objective # 3. However, the scope of assessing oxidative stress should be broader than just the PM effort. This will help address objective # 4. The last presentation sets the stage for the next day.

Part 2. Cigarette smoke-induced inflammatory responses (mechanisms and mode of action).

Section 1

- Presentations for this section of the symposium should focus on objectives # 1 and 2, with emphasis on inflammation.
- The following questions may provide guidance with objective # 2. Does the scientific literature suggest that intracellular and intercellular signaling and cell death play a role in the development of disease? Are these parameters predictive of disease?

Section 2. (after Lunch)
Presentations for this section should focus on objective # 3. However, the scope of assessing inflammation should be broader than just the PM effort. A broader scope will provide information that can be used to address objective # 4.

Part 3. Interventions (Reducing cigarette smoke-induced oxidative stress and inflammation).
One key question that should be addressed by the presenters in part 3 of the symposium is whether or not interventions affect disease outcomes?

Part 4. Round table discussions.

During this part of the symposium we will utilize the information presented in parts 1-4 to address specific questions related to all the objectives.

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